

**REMARKS**

The Office action of January 15, 2004 has been received and its contents carefully noted.

The specification has been amended in accordance with 35 U.S.C. § 112.

Claims 23-27, and 51-65 are pending in the application. Claims 28-50 have been canceled without prejudice rendering the previous rejections and objections to Claims 32-33, 38-43, and 48-50 moot. Claims 23-27 have been amended. Claims 51-65 have been added without the addition of any new matter.

Claims 23, 25-27, and 44-47 stand rejected under 35 U.S.C. § 102(a) as being unpatentable over Horowitz (U.S. Patent No. 4,989,257). Claims 24, and 28-30 stand rejected under 35 U.S.C. § 103(a) in view of Horowitz and Mokhtarian. Applicant respectfully traverses these rejections, and requests allowance thereof in the continuation prosecution application for the following reasons.

**The Claims are Patentable Over the Cited References**

**Claims 23, 25-27, and 44-47 are not anticipated by Horowitz**

Claims 23, 25-27, and 44-47 stand rejected under § 102(a) in view of Horowitz. Horowitz fails to disclose the features recited in these claims as amended such as representing an object by deriving a plurality of peak height coordinate values for peaks of an outline of the object in curvature scale space on the basis of the signals, and applying a non-linear transformation to the peak

height coordinate values to generate a representation of the outline.

Horowitz makes completely no mention of the recited feature of deriving a plurality of peak height coordinate values for peaks of an outline of the object in curvature scale space, and applying a non-linear transformation to the peak height coordinate values to generate a representation of the outline. In strong contrast, Horowitz solely describes a procedure for alphanumeric character recognition using pixel data by performing Fourier transforms, autocorrelations, and binary moment calculations to recognize character features. (see Abstract, FIGs. 1-4, Summary of the Invention). Horowitz makes no mention of deriving peak height coordinate values in curvature scale space as recited, and further Horowitz only discloses alphanumeric character recognition which is significantly distinct from representing an object from an image by deriving peak height coordinate values in curvature scale space as recited.

Horowitz fails to disclose deriving a plurality of peak height coordinate values for peaks of an outline of the object in curvature scale space making the claimed invention patentably distinct from the cited reference.

**Claims 24, and 28-30 are not made obvious by Horowitz and Mokhtarian**

Claims 24, and 28-30 stand rejected under § 103(a) in view of

Horowitz and Mokhtarian. As contended above, Horowitz makes no mention of the recited features and is wholly unrelated to the claimed invention as Horowitz solely describes an alphanumeric character recognition method. Further, Mokhtarian fails to disclose the recited features as Mokhtarian solely describes an object recognition method that uses CSS representations for matching (recognition) of an object in strong contrast to generating CSS representations to represent an object (outline) as recited. Mokhtarian's system for object recognition is significantly distinct from the claimed invention which recites deriving a CSS representation to represent an object outline.

Horowitz and Mokhtarian, either alone or in combination, fail to disclose representing an object by deriving a plurality of peak height coordinate values for peaks of an outline of the object in curvature scale space on the basis of the signals, and applying a non-linear transformation to the peak height coordinate values to generate a representation of the outline making the claimed invention patentably distinct and non-obvious from the cited reference.

### Conclusion

In view of the amendments and remarks submitted above, it is respectfully submitted that all of the remaining claims are allowable and a Notice of Allowance is earnestly solicited.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayments to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

The Examiner is invited to contact the undersigned at (703) 205-8000 to discuss the application.

Respectfully submitted,

BIRCH, STEWART, KOLASCH, & BIRCH, LLP

by Clint Derdine 4/035  
Michael K. Mutter, Reg. #29,680

MKM/CAG:tm  
1906-0127P

P.O. Box 747  
Falls Church, VA 22040-0747  
Phone: (703) 205-8000